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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,894	11/12/2001	Johan Willem Gosselink	T0853 US	6052

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EXAMINER

MEDINA SANABRIA, MARIBEL

ART UNIT PAPER NUMBER

1754

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,894

Applicant(s)

GOSSELINK ET AL.

Examiner

Maribel Medina

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-11, 14, 15, 18, 19 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 7-8, 16-17, 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because: The identifier "Fig. 1" should be deleted. See 37 CFR 1.84 (u) (1) *"Where only a single view is used in an application to illustrate the claimed invention, it must not be numbered and the abbreviation "FIG." Must not appear."* Correction is required.

Specification

2. The disclosure is objected to because of the following informalities: the term "Fig. 1" in page 11, lines 25 and 26; page 12, line 27; and page 13, lines 3 and 14 should be changed to -- The Figure--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the watergas-shift step". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 9-11, 14-15, 18-19 and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,152,976 (Fong et al) as evidenced by US Patent No. 4,225,418 (Hilfman).

Fong et al disclose a process for producing hydrogen wherein refinery off gas is first passed through a partial oxidation unit and then thru a shift converter in order to obtain a purified hydrogen-containing gas. The refinery off gas used as feedstock generally contains saturated and unsaturated hydrocarbons and other impurities such as organic sulphur, nitrogen species, and inorganic agents including H_2S , COS, SOx, NH_3 , HCN and arsine. The refinery off gas is generated in processes such as hydrotreating units. (See col. 2, lines 47-67). Fong et al further discloses that the produced hydrogen can be used in a variety of applications such as hydrocracking (See col. 6, lines 34-42).

Fong et al disclose treating off gas streams from a hydrotreating unit. Hilfman is provided as evidenced to show that a hydrotreating process encompasses the process of hydrocracking (See col. 1, lines 29-42). Therefore the instantly claimed invention is fully disclosed by Fong et al.

In regards to the limitations of claims 2-3, 6, 9, 11, 14-15, and 21-24, the process of Fong et al will inherently provide them once the hydrocracking step is carried out. Hilfman shows that hydrocracking comprises hydrocracking a hydrocarbonaceous material into lower boiling point hydrocarbons, with a zeolite-containing catalyst (See col. 3, lines 26-40). Hilfman further discloses that the products on hydrocracking processes comprise among others kerosene

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and gas oil (See col. 3, lines 60-67). Hilfman further discloses a hydrocracking temperature in the range from 600-900°F (315-482°C) and a pressure in the range of 500-5000 psig (34-340 atm) (See col. 4, lines 27-32). Regarding claim 10, Fong et al disclose the removal of hydrogen sulphide present in the gaseous stream in order to produce elemental sulphur.

Note that the secondary reference(Hilfman) isnly provided as evidence. "To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." (See *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ 2d 1746, 1749 (Fed. Cir. 1991).

No difference is seen between the instantly claimed invention d Fong et al disclosure.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong et al as evidenced by Hilfman as applied to claims 1-6, 9-11, 14-15, 18-19, and 21-24 above, and further in view of US Patent No. 5,853,566 (Kraushaar-Czarnetzki et al).

Fong et al as evidenced by Hilfman apply herein as above. Fong et al as evidenced by Hilfman fail to disclose that the zeolite catalyst for the hydrocracking process is a beta zeolite.

Kraushaar-Czarnetzki et al is relied upon to teach the use of beta zeolites in hydrocracking process to produced lower boiling hydrocarbons.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a beta zeolite as the zeolite on the hydrocarbon catalyst of Fong et al as evidenced by Hilfman, since Hilfman process is directed to any known zeolite and since Kraushaar-Czarnetzki et al disclose the advantages of a beta zeolite, over other zeolites. One of ordinary skill in the art would be motivated to use a beta zeolite in view of its enhanced activity on hydrocracking process as taught by Kraushaar-Czarnetzki et al

Allowable Subject Matter

9. Claims 7, 8, 16, 17 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Claims 7, 8, 16, 17 and 20 discloses allowable subject matter, Fong et al discloses the partial oxidation of the gases to be treated, however, fail to disclose or suggest and teaches away for the "catalytic" partial oxidation of the gases. Note that Fong et al clearly disclose in claim 1, that thee partial oxidation is carried out in the absence of a catalyst.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maribel Medina whose telephone number is (571) 272-1355. The examiner can normally be reached on Monday through Friday from 7:30 AM to 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-0994.

Maribel Medina
Maribel Medina
Examiner
Art Unit 1754